



The Business Case for Sustainable Design and Manufacture: Concept to Recycling

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RMIT University/ISS Institute International Fellow

A significant and exciting initiative for

Automotive designers

Industrial designers

Product designers

Architects

Interior designers and decorators

Engineers

Builders

Manufacturers

Honours and research students

...and those who wish to explore sustainable design and manufacture from concept to recycling.

Dr. Wulf-Peter Schmidt is the recipient of a prestigious, RMIT University/ISS Institute International Fellowship, sponsored by RMIT University.

Dr. Schmidt did his PhD in environmental engineering in 1997 in the field of recycling and Life Cycle Assessment and has published over 60 papers so far.

He has been with Ford-Werke AG since 1997 working first-hand in the field of LCA / Design for Environment and environmental strategy. He is now Technical Specialist in Vehicle Recycling Research Projects, Design for the Environment, LCA and LCC, cross-carline product and product development support.

His areas of specialisation are:

- Design for Environment
- LCA
- Life Cycle Management
- Sustainable Vehicle Design
- Vehicle Recycling
- Integrated product policy (IPP)

Dr. Schmidt belongs to the Editorial Board of 'The International Journal of Life Cycle Assessment'.

Publications

Schmidt, W.-P.; Taylor, A.: Ford of Europe's Product Sustainability Index. In: Proceedings of 13th CIRP International Conference on Life Cycle Engineering. Leuven May 31st – June 2nd, pp 5 - 10. Katholieke Universiteit Leuven: 2006

Schmidt, W.-P.; Dahlqvist, E.; Finkbeiner, M.; Krinke, S.; Lazzari, S.; Oschmann, D.; Pichon, S.; Thiel, Ch.: Life Cycle Assessment of Lightweight and End-of-Life Scenarios for Generic Compact Class Passenger Vehicles. In: International Journal of LCA 9 (6), pp 405 – 416. Landsberg: ecomed publishers 2004

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Schmidt, W.-P.: Environmental Life Cycle Chain Management. In: LCM 2001 Copenhagen abstract book on the 1st international conference on LCM August 27-29, pp 97-100. Copenhagen 2001

Schmidt, W.-P.: Environmental Product Improvements, Product Re-designs and Product Innovations - Opportunities and Challenges. pp 1-8. In: Proceedings of the conference euroEnvironment 2000, Aalborg (Denmark), 18.-20.10.2000

With appreciative thanks

Fellowship Sponsor



Endorsements



Professional development points are available

workshop



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The Business Case for Sustainable Design and Manufacture: Concept to Recycling

This two-day workshop examines:

Context

- The importance of design to us as human beings (our lifestyle and emotions) and to the environment in which we live and work.
- The necessity of designing for a sustainable future.
- Strategies which need to be implemented when dealing with either large or small companies to maximise the benefit for the designer, manufacturer and the client.

What and Why?

- Definitions, historical roots, current legislative framework (Europe), opportunities for companies, consumers and the environment.
- Overview about the tools to assess economic, environmental and social aspects of products/processes, within economies and purchasing.
- Determining what tool is best to use for what question/situation.

How?

- Life Cycle Costing (LCC) methodology
- What is LCC? Different system boundaries depending on the goal - costing categories, discounting, options to cover external costs and limits of these approaches, procedure and issues.
- Limits of LCC.

When?

Application examples: environmental business cases, uncertainties in LCC and future developments.

Project Teams

The Project Teams bring together from along the Supply chain such as designers, engineers, and manufacturers/technicians - people from two different perspectives and skill bases, who will work in a team.

Workshop participants will be placed in teams to undertake exercises related to different products and different perspectives of a product's LCC.

Case Study: Mobile Phone Case Study: Furniture Case Study: Car Bumper Case Study: Homewares

Each Case Study will have three teams assigned to examine one area each:

- Project Team 1** Design an environmentally-favourable product with high durability and modularity
- Project Team 2** Design a product based on service ideas
- Project Team 3** The consumer's perspective.

It is anticipated that the differing perspectives will create a dynamic fusion where innovation can flourish and where amazing solutions may be revealed.

Topics covered will include:

- Where do you have an environmental business case?
- What is an environmental business case?
- Pros & cons of an efficiency approach.

skills + knowledge + good design + innovation = competitive edge • good business



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Terminology

Product Life Cycle refers to the succession of stages a product goes through. It includes mining and materials production, production of components and subassemblies, assembly of products, use and disposal of the product.

Product Life Cycle Management is the succession of strategies used by management as a product goes through its life cycle.

Life-cycle assessment (LCA) is the process of evaluating the effects that a product has on the environment over the entire period of its life thereby increasing resource-use efficiency and decreasing liabilities. It can be used to study the environmental impact of either a product or the function the product is designed to perform.

Design for Environment is a multi-objective design process that can be interpreted as a design oriented towards the choice of materials, shapes and structures which achieve the best trade-off between environmental parameters, and other techno-economical parameters for a specific product.

Eco-Design is the integration of environmental aspects into the product design, considering environmental aspects at all stages of the product development process, striving for products which make the lowest possible environmental impact throughout the product life cycle.

Life Cycle Costing is a process to determine the sum of all the costs associated with an asset or part thereof, including acquisition, installation, operation, maintenance, refurbishment and disposal costs.

Fee

\$480 which includes tutelage by Dr. Schmidt, use of equipment and materials, course notes, morning and afternoon refreshments. The fee is subsidised by the ISS Institute.

Early Bird rate for those who register and pay prior to 20th November 2006 is \$390.

Bring your own lunch and maximise the time spent working and networking with the other course participants - sharing ideas and techniques.

Format

The program comprises lectures, demonstrations, discussions and a hands-on project.

Participants work in teams of two people - e.g. one designer and one technical/production person.

Venue

RMIT University
RMIT Council Chamber
RMIT Building 1, level B, Room 11

Enter building 1 from the Bowen Street entrance, go up to level B (red carpeted stairs) and you come directly to the entrance of room

Date•Time

A two-day workshop from 9.30am to 5pm

DAY 1
Wednesday 29 November 2006

DAY 2
Thursday 30 November 2006



The Business Case for Sustainable Design and Manufacture: Concept to Recycling

Registration Form

Complete the Registration Form and post, email or fax to the ISS Institute.

You are welcome to forward on to others who would be interested in attending.

I am registering

Post, email or fax to:

ISS Institute
Suite 101, 685 Burke Road, Camberwell 3124, Victoria
T 03 9882 0055 F 03 9882 9866 E issi.ceo@pacific.net.au

Fee

Early Bird rate for those who Register and pay prior to 20th November 2006 is \$390 which includes tutelage by Dr Schmidt, course notes, morning and afternoon refreshments. The fee is subsidised by the ISS Institute.

After 20th November 2006 the fee is \$480.

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Conditions of Registration I hereby agree to abide by the regulations of the ISS Institute

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• **Cancellation** ISS Institute reserves the right to cancel the course if minimum enrolment numbers are not attained. In the event of cancellation due to insufficient enrolments or other, all fees will be fully refunded. Two or more working days notice will be given should the course be cancelled •

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September 2006